

Patent Abstracts of Japan

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A(Lio.sxZn1-1-7 Mgr O1-0.75x) · (1+0.25X) Ga2 O3 : BMn

INT.CL.

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TITLE

GREEN LIGHT EMITTING

FLUORESCENT MATERIAL

ABSTRACT :

PURPOSE: To obtain the subject fluorescent material composed mainly of a specific gallic acid salt-type multiple oxide green-light emitting fluorescent material and containing a specific amount of ZnO:Zn, capable of keeping high luminance and excellent color purity for a long period and useful for fluorescent character display tube, plasma display panel, etc.

CONSTITUTION: This fluorescent material is a green light emitting fluorescent material composed mainly of a gallic acid salt-type multiple oxide green light emitting fluorescent material having a spinel-type crystal structure and expressed e.g. by the formula (A is 0.8-1.5; X and Y are each 0-0.6 and 0≤X+Y≤1; B is 0.001-0.1) and containing 1-50wt.% of ZnO; Zn which is a bluish green light emitting fluorescent material containing Zn as an activator. The compound of the formula wherein Y is 0 can be produced e.g. by mixing Ga₂O₃, Li₃PO₄ and ZnO having an average particle diameter of ≤5μm, baking the powdery mixture at 1200°C in air, removing unreacted Zn0 and Li₃PO₄, dispersing the obtained fluorescent matrix in an MOSO₄ solution, drying the dispersion and heat-treating the dried product in a reducing atmosphere at 1100°C.

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